



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,366	01/21/2004	Naohiro Kageyama	520.43411X00	9838

20457 7590 10/12/2006

ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 NORTH SEVENTEENTH STREET  
SUITE 1800  
ARLINGTON, VA 22209-3873

EXAMINER
----------

PALADINI, ALBERT WILLIAM

ART UNIT	PAPER NUMBER
----------	--------------

2125

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/760,366

Applicant(s)

KAGEYAMA ET AL.

Examiner

Albert W. Paladini

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 1/21/04 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the enclosed IDS refers to application number 10/760366 with inventor Dennis Klein. It appears to have been mistakenly filed with this application. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1-8 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 1**

The methodology recited will not necessarily result in the generation of a compiler test program If a finite number of sub-procedural descriptions are randomly selected from a set of sub-procedural descriptions, this subset may not constitute a complete logically connected set of sequential procedures to form a test program. As a simple example, assume that two sub-procedural descriptions are randomly selected. The first randomly selected sub-procedural description is "read input data" and the second randomly selected sub-procedural description is "measure output." This does not result in a complete test program and there are missing steps. If an attempt is made to arrange the selected procedures in a logical sequence to perform a desired function, first there may be missing steps between any two procedures, and second the arbitrarily selected procedures may not form a complete set to perform the desired function. Bird (5692122) states in (C1, L32-62), "Generating a testcase by purely random selection of commands and variables would invariably result in an invalid piece of code, so it is necessary for the "random" selection to include certain controls."

**Claim 5**

The methodology recited will not necessarily result in the generation of a compiler test program If a finite number of program cells are randomly selected from a set of program cells, this subset may not constitute a complete logically connected set of program cells to form a test program. Since an arbitrary number of program cells are randomly selected, it may not be possible to arrange them in a manner to form a continuous procedure. There may be program cells missing, and the end point may not be contained. Bird (5692122) states in (C1, L32-62), "Generating a testcase by purely random selection of commands and variables would invariably result in an invalid piece of code, so it is necessary for the "random" selection to include certain controls."

**Claim 13**

The methodology recited will not necessarily result in the generation of a compiler test program If a finite number of sub-procedural descriptions are randomly selected from a set of sub-procedural descriptions, this subset may not constitute a complete logically connected set of sequential procedures to form a test program. As a simple example, assume that two sub-procedural descriptions are randomly selected. The first randomly selected sub-procedural description is "read input data" and the second randomly selected sub-procedural description is "measure output." This does

Art Unit: 2125

not result in a complete test program and there are missing steps. If an attempt is made to arrange the selected procedures in a logical sequence to perform a desired function, first there may be missing steps between any two procedures, and second the arbitrarily selected procedures may not form a complete set to perform the desired function. Bird (5692122) states in (C1, L32-62), "Generating a testcase by purely random selection of commands and variables would invariably result in an invalid piece of code, so it is necessary for the "random" selection to include certain controls."

Appropriate correction and clarification is required.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Blume (6223337).

From (C2, L66) to (C2, L11), Blume discloses a compiler test system where a compiler is tested by comparing the output of a compiler without optimization to produce second executable code to the output of a compiler with optimization to produce first executable code. It is inherent that the compiler with optimization is the proven compiler.

Art Unit: 2125

### ***Art Rejection***

An art rejection was not provided for 1-8 and 13, since it could not be determined how these claims could produce a feasible system as shown in paragraphs 2 and 3.

### ***Relevant Prior Art***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mattson (6430741) discloses a system and method for checking data accuracy in computer programs, and teaches testing compiler generated code on a wide variety of inputs so that every block of code is exercised.

Yoshino (6507809) discloses a computer simulation system and method which allows the user to analyze the performance of an information processing system and thus to find out hardware defects of the system before the actual machine is available. Performance simulation also allows the user to evaluate the performance of a compiler and an operating system (OS) for the information processing system, and thus contributes to improving the performance of such software.

Ghosh (6880154) discloses an alias-free test of a compiler to determine whether the internal pointers used to reference elements of a selected array are defined once in each call of a given program and then never aliased in the program. If the alias-free test succeeds for the internal pointers of the array, then the compiler under test can effectively create object code to reorder their store and load respectively. The alias-free test of compiler determines whether a dynamically allocated multidimensional array will behave as a static array after it is allocated at runtime.

Weaver (7065631) discloses software controlled registered map, which is designed to experiment with register models to test compilers generating software to run on future hardware implementations.

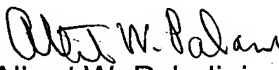
Art Unit: 2125

6. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (571) 272-3748. The examiner can normally be reached from 7:00 to 3:00 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (571) 272-3749. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

September 28, 2006

  
Albert W. Paladini  
Primary Examiner  
Art Unit 2125